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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/830,204
Filing Date: April 21, 2004
Appellant(s): PATTERSON ET AL.

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 03/04/2010 appealing from the Office action mailed 10/27/2009.

(1) Real Party in Interest

The examiner has no comment on the statement of the real party in interest.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application: claims 1-8, and 10-20.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner.

The 35 U.S.C 112, 2nd paragraph ground of rejection for claim 4 have been withdrawn by the examiner.

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

Umberger et al., U.S. Patent Application Publication No. 2002/0091746, July 11, 2002.

7,159,071	Ikeuchi	02-2004
7,152,142	Guha	10-2003

6,157,963

Courtright II

03-1998

Elliott, Jr., et al., U.S. Patent Application Publication No. 2004/0205102, October 14, 2004.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 19-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per claims 19-20, they recited "an article of manufacture" comprising computer readable medium. Wherein the computer readable medium as defined in the specification, paragraph [0034], as any means that can propagate the program for use by the device (i.e. could include a carrier wave signal). The program code embedded in a carrier wave signal does not produce a tangible result. Therefore, claims 19-20 are directed to non-statutory subject matter.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. The following terms lacks antecedent basis:
the queue – claim 5;
- b. The claim language in the following claims is not clearly understood:
as per claim 1, lines 3-4, it is not clearly understood what is meant by “measuring a parameter indicative of workload of an interface to a storage system” (i.e. measuring the workload of the storage controller or the workload of the storage system). For the purposed of examination, examiner will interpreted the limitation as “measuring the workload of the storage system”).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 7-8, 10, 14-16, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umberger et al (hereafter Umberger) (U.S. Publication No. 20020091746).

Umberger was cited in the previous office action.

As per claim 1, Umberger teaches the invention substantially as claimed including a method of managing task execution in a storage system (abstract) comprising:

measuring a parameter indicative of storage system workload (paragraphs [0039], [0047], [0050], [0056]); and

assigning priority of tasks executable on the system based on the measured parameter (paragraphs [0005], [0008], [0011]-[0012], [0040], [0059]-[0063]), wherein assigning comprises assigning to individual tasks an allowable utilization value at which the individual tasks are authorized to execute (paragraphs [0062], [0065]).

Umberger did not specifically teach the allowable utilization value is indicative of importance of the task.

However, Umberger teaches that assigning to individual tasks an allowable utilization value at which the individual tasks are authorized to execute when the capacity of the system change (paragraphs [0062], [0065]).

It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have recognized that the more the priority of the task is the more resources the task going to get. Thus, when the allowable utilization value at which the individual tasks are authorized to execute high, it is indicated that the individual tasks is importance. Therefore, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to utilize Umberger's system as modified to allocate execution of tasks based on details characteristic of a workload (Umberger, paragraph [0012]).

As per claim 4, Umberger teaches maintaining a queue of tasks, the individual tasks having the assigned allowable utilization values (paragraphs [0039]-[0041]), measuring a current available value (paragraphs [0047], [0049]-[0050]; querying the tasks on the queue in the queue order [paragraph [0051]), executing a queried task that has an assigned allowable utilization value higher than the current available value and deferring to a next task on the queue, if any, for a queried task that has an assigned allowable utilization value lesser than the current available value (paragraphs [0051], [0059]-[0066], [0067]).

As per claim 7, Umberger teaches maintaining a data structure associated with a utilization task queue indicative of allowable utilization of all tasks on the queue (paragraph [0039]); and executing or deferring execution of all tasks on the utilization task queue based on the data structure and a measurement of current utilization (paragraph [0040]-[0041]).

As per claim 8, it is rejected for the same reason as claim 1 above. In addition, Umberger teaches an array controller (fig. 1, array controller 102), a performance measurement utility (fig. 3, item 303), and a task management utility (fig. 3, item 304), and a queuing utility that maintains a task queue and processes the tasks based at least in part on a current measurement of storage array workload (paragraphs [0039]-[0040], [[0046]).

As per claim 10, Umberger teaches that wherein the task management utility operates in combination with the queuing utility and the performance measurement utility to maintain a queue of tasks with each task assigned a threshold utilization, periodically measure current utilization, and execute tasks on the queue in the queue order so long as the current utilization meets the task threshold utilization (paragraphs [0039]-[0041], [0047], [0060]-[0063], [0065]-[0067]).

As per claim 14, it is rejected for the same reason as claim 7 above.

As per claim 15, Umberger teaches the storage array is a Redundant Array of Independent Disks (RAID) array in a structure selected from among RAID0, RAID1, RAID2, RAID3, RAID4, RAID5, RAID6, RAID7, and RAID10 9 (paragraphs [00069]-0076]).

As per claim 16, it is rejected for the same reason as claims 8 and 10 above. In addition, Umberger teaches an interface capable of coupling to a storage array (fig. 1).

As per claims 19-20, they are rejected for the same reason as claims 1, 8 and 10 above.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Umberger et al (hereafter Umberger) (U.S. Publication No. 20020091746), as applied in claim 1 above, and in view of Ikeuchi et al (hereafter Ikeuchi) (U.S. Patent No. 7159071).

Ikeuchi was cited in the previous office action.

As per claim 2, Umberger teaches the invention substantially as claimed in claim 1 above. Umberger did not specifically teach wherein the parameter comprises host input/output operations per units time and counting a number of host input/output operations per unit time as the parameter indicative of workload.

However, Ikeuchi teach wherein the parameter comprises host input/output operations per units time and counting a number of host input/output operations per unit time as the parameter indicative of workload (col. 7, lines 35-42).

It would have been obvious to one of an ordinary skill in the art at the time the invention was made to combined the teaching of Umberger and Ikeuchi because both of the systems are dealing with the same field endeavor for addressing the need of managing the workload of the storage system and by incorporated the teaching of counting a number of host input/output operations per unit time as the parameter indicative of workload as suggested in Ikechi into Umberger 's system would produce a storage system that capable of controlling the load balance of the disk in a RAID configuration (Ikeuchi, col. 2, lines 36-37).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Umberger et al (hereafter Umberger) (U.S. Publication No. 20020091746), as applied in claim 1

above, and in view of Elliott, Jr et al (hereafter Elliott) (U.S. Publication No. 20040205102).

Elliott was cited in the pervious office action.

As per claim 3, Umberger teaches the invention substantially as claimed in claim 1 above. Umberger did not specifically teach wherein the parameter comprises interface bandwidth utilizes as a proportion of interface bandwidth capacity.

However, Elliott teaches wherein the parameter comprises interface bandwidth utilizes as a proportion of interface bandwidth capacity (paragraph [0057], lines 6-10).

It would have been obvious to one of an ordinary skill in the art at the time the invention was made to combined the teaching of Umberger and Elliott because both of the systems are dealing with the same field endeavor for addressing the need managing system network and by incorporated the teaching of interface bandwidth utilizes as a proportion of interface bandwidth capacity as suggested in Elliott into Umberger's system would produce a system that capable of managing the bandwidth requirement of the system (Elliott, paragraph [0001], lines 1-2).

Claims 5-6, 12-13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umberger et al (hereafter Umberger) (U.S. Publication No. 20020091746), as applied in claims 1, 8, and 16 above and in view of Courtright II et al (hereafter Courtright) (U.S. Patent No. 6157963).

Courtright II was cited in the previous office action.

As per claims 5-6, Umberger teaches the invention substantially as claimed in claim 1 above. Umberger did not specifically teach maintaining a plurality of task queues including a task queue that bases execution on assigned and measured utilization, at least one task queue with a priority that differs from the utilization based queue, and maintaining a high priority task queue for queuing and executing, in the queue order, tasks assigned a high priority, and maintaining a utilization task queue for queuing and executing tasks, when the high priority queue is empty, in an order based in part on the order of queuing and in part on assigned allowable utilization value of a task and a measured current utilization value.

However, Courtright teaches maintaining a plurality of task queues including a task queue that bases execution on assigned and measured utilization, at least one task queue with a priority that differs from the utilization based queue, and maintaining a high priority task queue for queuing and executing, in the queue order, tasks assigned a high priority, and maintaining a utilization task queue for queuing and executing tasks, when the high priority queue is empty, in an order based in part on the order of queuing and in part on assigned allowable utilization value of a task and a measured current utilization value (fig. 3; col. 4, lines 55-67; col. 5, lines 1-43; col. 6, lines 1-67; col. 7, lines 1-63; col. 8, lines 21-62).

It would have been obvious to one of an ordinary skill in the art at the time the invention was made to combined the teaching of Umberger and Courtright because both of the systems are dealing with the same field endeavor for addressing the need managing I/O tasks (requests) in a storage system and by incorporated the teaching of

using different queues to managing I/O tasks as suggested in Courtright into Umberger's system would improve the integrity of Umberger's system by providing a system that scheduling I/O tasks to one or more disk drives or arrays in such a way that preventing lower priority I/O tasks are not starved of resources (Courtright, col. 1, lines 54-55; col. 2, lines 3-4).

As per claims 12-13, and 17, they are rejected for the same reason as claims 5-6 above.

Claims 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umberger et al (hereafter Umberger) (U.S. Publication No. 20020091746), as applied in claim 8, and 16 above and in view of Guha et al (hereafter Guha) (U.S. Patent No. 7152142).

Guha was cited in the previous office action.

As per claim 11, Umberger teaches the invention substantially as claimed in claim 8 above. Umberger did not specifically teach the parameter comprises host input/output operations per unit time, interface bandwidth as a proportion of bandwidth capacity, disk busy, disk transfers per second, kbyte throughput per second, number of input/output operations per time interval, and input/output wait percentage.

However, Guha teaches the parameter comprises host input/output operations per unit time, interface bandwidth as a proportion of bandwidth capacity, disk busy, disk

transfers per second, kbyte throughput per second, number of input/output operations per time interval, and input/output wait percentage (col. 8, lines 45-64).

It would have been obvious to one of an ordinary skill in the art at the time the invention was made to combined the teaching of Umberger and Guha because both of the systems are dealing with the same field endeavor for addressing the need of managing the workload of the storage system and by incorporated the teaching the parameter comprises host input/output operations per unit time, interface bandwidth as a proportion of bandwidth capacity, disk busy, disk transfers per second, kbyte throughput per second, number of input/output operations per time interval, and input/output wait percentage as suggested in Guha into Umberger 's system would improve the integrity of Umberger 's system by providing a storage controller that automatically adapts the data organization in order to satisfy different workloads (col. 3, lines 65-66).

(10) Response to Argument

In the remarks, Appellant argues that claims 19-20 are directed to a statutory subject matter. The Appellant points out in the appeal brief, page 8, 5th paragraph that "the first step according to the examination instructions is to determine if the claim is directed to a process, a machine, manufacture, or composition of matter". Thus the Appellant determined the article of manufacture according to claims 19-20 are in fact directed to a machine by relying on an example of a controller such as the array controllers 300 or 400 to conclude that the controller as recited in claim 19 represented

a physical device. Thus claim 19 according to the Appellant recited a machine, which is patent eligible subject matter under 35 U.S.C. 101.

Examiner respectfully disagrees with the Appellant's argument. First, claims 19-20 recited "an article of manufacture comprising a controller comprising a computer readable medium having computable readable program code embodied therein for managing task execution in a storage array". Based on the Appellant's argument that "the first step according to the examination instructions is to determine if the claim is directed to a process, a machine, manufacture, or composition of matter", which in this case, claims 19-20 are directed to a manufacture. According to MPEP 2111, examiner obligates to give the "phrase or terms" recited in the claims their broadest reasonable interpretation as it would by one of an ordinary skill in the art, and further stated that examiner should not import into a claim limitation(s) that are not part of the claim. As such, the controller as recited in claim 19 is not necessarily limited to as the array controllers 300 or 400 which is a physical device, but it can be any controller such as a software controller. Also, the array controllers 300 or 400 are examples of the controller, which is not a part of the claims. Therefore, examiner interprets the claim as an article of manufacture comprising a controller (which is a software) associating a computer readable medium (carrier wave signal) having computable readable program code embodied therein for managing task execution in a storage array. According to the specification, paragraph [0034] stated that "the computer readable medium" as recited in the claim can be any means that can propagate the program for use by the device. Based on MPEP 2111, examiner obligates to give the "phrase or terms" recited

in the claims their broadest reasonable interpretation as it would by one of an ordinary skill in the art, as such the computer readable medium as recited in the claim including a carrier wave signal. The carrier wave signal is direct to a non-statutory subject matter. Hence, claims 19-20 are directed to a non-statutory subject matter.

In the remark, the Appellant argues that the language as recited in claim 1 is not indefinite as failing to point and distinctly claim the subject matter which the Appellant regards as the invention. The Appellants points out that claim 1 is recited "measuring a parameter" not "measuring the workload of the storage controller" nor "the workload of the storage system" (see appeal brief, page 11, 2nd paragraph). The appellant further points out that the parameter may be "indicative of workload of an interface to a storage system", but "the workload of an interface" is not reference to the workload of a storage system (see appeal brief, page 11, 3rd paragraph).

Examiner respectfully disagrees with the Appellant's argument. Claim 1 recited "measuring a parameter indicative of workload of an interface to a storage system" which raises a question as to what the meet and bound of the invention the Appellant intended to seek. First, the claim language as recited in claim 1 suggested that "the parameter" as recited in claim 1 is related to the workload (i.e. **"parameter indicative of workload"**). Second, according to MPEP 2111, examiner obligated to give the "phrase or terms" recited in the claims their broadest reasonable interpretation as it would by one of an ordinary skill in the art. As such, the phrase "an interface to a storage system" would be reasonable for one of an ordinary skill in the art to interpret as

"storage controller" because it is well known in the art that the storage controller is an interface between the storage system and the user. By reading the language as recited in claim 1, one would raise a question as to whether the claim language suggested that "measuring **a parameter indicative of workload of storage controller** to a storage system" or "measuring **a parameter indicative of workload a storage system including the storage controller**". Thus it is clearly shown that the claim language as recite in claim 1 is indefinite by failing to point and distinctly claim the subject matter which the Appellant regards as the invention.

In the remark, the Appellant argues that the language as recited in claim 5 is not indefinite as failing to point and distinctly claim the subject matter which the Appellant regards as the invention. The Appellant points out that "the queue" is not insolubly ambiguous (see appeal brief, page 12, 2nd paragraph) because the specification makes a numerous reference to "the queue".

Examiner respectfully disagrees with the Appellant's argument. According to MPEP 2111, examiner instructs not to import into a claim limitation that are not a parts of the claim. Therefore, although the specification makes a numerous reference to "the queue", but it is still not clear in the claim as to what "the queue" as recited in claim 5 refers to since this is the first mention of "**the queue**". Claim 5 is depended in claim 1, however, there isn't any queue recited in claim 1. Thus the limitation of "maintaining a plurality of task queues including **the queue** that bases execution on assigned allowable utilization" will raise a question as to which "**queue**" of claim 1 the Appellant

refers to. Hence, claim 5 is indefinite by failing to point and distinctly claim the subject matter which the Appellant regards as the invention.

In the remark, the Appellant argues that Umberger fails to teach "assigning an allowable utilization value at which individual tasks are authorized to execute" as recited in claim 8, 16, and 19.

Examiner respectfully disagrees with the Appellant's argument. First the Appellant argues that "a performance requirement" as disclosed in Umberger is not the "allowable utilization value" as recited in claim 1. The Appellant goes on by pointing out that the "allowable utilization value" according to the invention may be "a maximum rate of utilization beyond which a new task may be allowed to additionally burden the storage array" (see appeal brief, page 14, 2nd paragraph), in contrast the "performance requirement" as disclosed by Umberger which specifies the available processing resources preferred for a particular work request, and the work request should not be given less than the preferred values. Although, the Appellant relies on the specification to give an example of "allowable utilization value" as "a maximum rate of utilization beyond which a new task may be allowed to additionally burden the storage array", however, according to MPEP 2111, examiner instructs not to import into a claim limitation that are not a parts of the claim. Hence, in this case, the example of the "allowable utilization value" as "a maximum rate of utilization beyond which a new task may be allowed to additionally burden the storage array" can not be import into claim 1. Also, the Appellant suggested that the example of "allowable utilization value" referred

in the brief (see appeal brief, page 14, 2nd paragraph) **maybe** an example not a definition of “allowable utilization value”. In additional MPEP 2111, examiner obligated to give the “phrase or terms” recited in the claims their broadest reasonable interpretation as it would by one of an ordinary skill in the art. As such, the phrase “allowable utilization value” would be reasonable for one of an ordinary skill in the art to interpret as an allowable/preferred value that a task entitled to have. Thus, Umberger disclosed that “a performance requirement” which specifies the available processing resources preferred for a particular work request, and the work request should not be given less than the preferred values (Umberger, paragraphs [0062], [0063], [0067]) or in another word, Umberger disclosed an allowable/preferred value that a task entitled to have. Therefore, it is obvious to one of an ordinary skill in the art that the “allowable utilization value” as recited in claim 1 is the same as the “performance requirement” as disclosed in Umberger. Second, the Appellant argues that the task as recited in claim 1 only “authorized to execute” **if the maximum allowable utilization value is not exceed** (see appeal brief, page 14, 4th paragraph). However, claim 1 did not recite the limitation of “the task authorized to execute **if the maximum allowable utilization value is not exceed**”. Therefore, the condition of “when the task is authorized to execute” is not considered by examiner. Claim 1 only recited “assigning an allowable utilization value at which individual tasks are authorized to execute” which is taught by Umberger (paragraphs [0062], [0063], [0067]). The Appellant relies on the first and the second to argue that Umberger fails to teach assigning an allowable utilization value at which individual tasks are authorized to execute. Therefore, based on the previous

response with regarding to the first and the second reasons above, it is clearly shown that Umberger teaches assigning an allowable utilization value at which individual tasks are authorized to execute as claimed in claims 1, 8, 16, and 19.

In the remark, the Appellant argues that it is not obvious for one of an ordinary skill in the art to have modified Umberger to teach the limitation of "the allowable utilization value is indicative of importance of the task" as recited in claims 1, 8, 16, and 19.

Examiner respectfully disagrees with the Appellant's argument. First, claim 1 suggested that based on the current workload of the storage system, the task being assigned an allowable utilization value at which the tasks are authorized to execute, and wherein the tasks is assigned based on their priorities. Thus it would have been obvious to one of an ordinary skill in the art to have recognized that the allowable utilization value assigned to the task related to the task priority and capacity of the system. Second, Umberger suggested that assigning to individual tasks an allowable utilization value at which the individual tasks are authorized to execute when the capacity of the system change, and wherein the tasks assigned based on the task priority (paragraphs [0062], [0063], [0065]). Thus, when the allowable utilization value at which the individual tasks are authorized to execute high, it is indicated that the individual tasks is importance. Therefore, based on the first and the second reasons above, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to have modified Umberger to teach the limitation of "the allowable

utilization value is indicative of importance of the task" as claimed in claims 1, 8, 16, and 19.

In the remark, the Appellant further argues that the "allowable utilization values" is not more resources (see appeal brief, page 15, 4th paragraph).

Examiner respectfully disagrees with the Appellant's argument. The Appellant relies on the specification to give an example of "utilization " as "defined using a number of measurements that accurately reflect the state of storage array", however, according to MPEP 2111, examiner instructs not to import into a claim limitation that are not a parts of the claim. Hence, in this case, the example of the "utilization" as "defined using a number of measurements that accurately reflect the state of storage array" can not be import into claim 1. Also, the Appellant suggested that the example of "utilization" referred in the brief (see appeal brief, page 15, 4th paragraph) **maybe** an example not a definition of "utilization". In additional MPEP 2111, examiner obligated to give the "phrase or terms" recited in the claims their broadest reasonable interpretation as it would by one of an ordinary skill in the art. As such, the phrase "allowable utilization value" would be reasonable for one of an ordinary skill in the art to interpret as an allowable/preferred value that a task entitled to have in term of resources. As such it would have been obvious to one of an ordinary skill in the art at the time the invention was made to have recognized that the "allowable utilization value" is utilized in Umberger and in the claim to indicate the allowable/preferred value that a task entitled to have in terms of resources.

In the remark, the Appellant argues that Umberger fails to teach "maintaining a data structure associated with a utilization task queue indicative of allowable utilization of all tasks on the queue" as recited in claim 7.

Examiner respectfully disagrees with the Appellant's argument. Umberger teaches maintaining a data structure associated with a utilization task queue indicative of allowable utilization of all tasks on the queue (paragraph [0039], the workload metric collector 302 accumulates (maintaining) statistic relating to computational demands of work requests (allowable utilizations of all tasks) places in the request queue (utilization task queue)).

In the remark, the Appellant argues that Umberger as applied in claim 1 and in view of Ikeuchi fail to teach claim 2 based on the rational that Umberger fails to teach claim 1.

Examiner respectfully disagrees with the Appellant's argument based on the responses of the above arguments. Therefore, Umberger as applied in claim 1 and in view of Ikeuchi teach claim 2.

In the remark, the Appellant argues that Umberger as applied in claim 1 and in view of Elliot fail to teach claim 3 based on the rational that Umberger fails to teach claim 1.

Examiner respectfully disagrees with the Appellant's argument based on the responses of the above arguments. Therefore, Umberger as applied in claim 1 and in view of Elliot teach claim 3.

In the remark, the Appellant argues that Umberger as applied in claims 1, 8, and 16 and in view of Courtright fail to teach claims 5, 6, 12, 13, and 17 based on the rationale that Umberger fails to teach claims 1, 8, and 16.

Examiner respectfully disagrees with the Appellant's argument based on the responses of the above arguments. Therefore, Umberger as applied in claims 1, 8, and 16 and in view of Courtright teach claims 5, 6, 12, 13, and 17.

In the remark, the Appellant argues that Umberger as applied in claims 8 and 16, and in view of Guha fail to teach claims 11 and 18.

Examiner respectfully disagrees with the Appellant's argument based on the responses of the above arguments. Therefore, Umberger as applied in claims 8 and 16, and in view of Guha teach claims 11 and 18.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Jennifer To/

Patent Examiner, AU 2195

Conferees:

/Meng-Ai An/

Supervisory Patent Examiner, Art Unit 2195

/Lewis A. Bullock, Jr./

Supervisory Patent Examiner, Art Unit 2193